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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,398

08/05/2005

Yang Yu

003301-226

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05/03/2007

BUCHANAN, INGERSOLL & ROONEY PC

POST OFFICE BOX 1404

ALEXANDRIA, VA 22313-1404

EXAMINER

MAI, NGOCLAN THI

ART UNIT

PAPER NUMBER

1742

MAIL DATE

DELIVERY MODE

05/03/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/530,398	<b>Applicant(s)</b> YU, YANG	
	<b>Examiner</b> Ngoclan T. Mai	<b>Art Unit</b> 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 4/7/05.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 2 is/are allowed.
- 6) ☒ Claim(s) 3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/7/05, 1/4/07</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Preliminary amendment filed 4/7/05 has been entered. Claims 1-3 are pending.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 3 is rejected under 35 U.S.C. 102(b) as being anticipated by Semel (U.S. Patent No. 6,068,813).

Semel discloses a sintered powder metal compact formed by mixing a prealloy powder containing iron and one or more alloying additives such as Mo and copper containing powder in the presence of a binder to bond the prealloy powder with copper containing powder, compacting the obtained mixture to a compacted body and sintering the compacted body, col. 3, l. 27 to col. 4, l. 29. Semel teaches prior to adding the binding agent, other alloying powders, such as graphite and additives such as lubricant and machining agents may be admixed with the iron-based prealloy powder, the copper containing powder and nickel containing powder, col. 11, l. 32-35. Semel also teaches the bonding can be carried out by diffusion bonding and partially alloying a mixture containing iron-based prealloy powder and copper containing powder, col. 13, l. 6-9.

While the sintered compacted bodies of Semel are not produced by further mixing the above powders with a second powder consisting of iron-based powder and a pre-alloyed iron-copper powder, the examiner notes that the sintered bodies taught by Semel in Table 9

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have dimension changes which are comparable to that of the applicants shown in Figure 1. The claimed sintered powder metal compact therefore reads on the sintered compacted body of Semel because it contains the same composition and dimensional changes as the applicant. Note that even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ964, 966 (Fed. Cir. 1985).

***Allowable Subject Matter***

4. Claims 1-2 are allowed.
5. The following is a statement of reasons for the indication of allowable subject matter: WO 02/059388 discloses a method for making a ferrous-based sintered article containing copper by compacting and sintering a mixture comprising, in addition to the prealloyed or diffusion bonded iron-copper powder, un-alloyed iron powder, a powder component comprising a steel powder containing at least some chromium or other martensite promoting element as an alloying element, wherein pre-alloyed iron-copper and/or diffusion bonded iron-copper powders are employed to promote martensite formation, page 9 line 25 to page 10, line 23. The reference neither teach dimension change of the sintered body or controlling such change nor disclose the step making copper content in a powder containing iron-based powder and prealloyed iron-copper powder equal

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to the copper content in diffusion bonded iron-copper powder by the manipulation recited in the claim.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoclan T. Mai whose telephone number is (571) 272-1246. The examiner can normally be reached on 9:30-6:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

n.m.

ROY KING  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700